REMARKS

Claims 1-40 are pending in the subject application. Claims 1-40 stand rejected under 35 U.S.C. § 103(a) and claims 31-40 stand rejected under 35 U.S.C. 112, first paragraph. Claims 1, 2, 5-20, 26-35, and 38-40 have been amended.

The Applicants appreciate the Examiner's thorough examination of the subject application and, moreover, the Examiner granting a telephone interview on May 11, 2005. The Applicants, however, respectfully request reconsideration of the subject application based on the above amendments and the following remarks.

35 U.S.C. § 112, SECOND PARAGRAPH REJECTIONS

The Examiner has rejected claims 31-40 under 35 USC 112, first paragraph. The Examiner asserts that, the subject matter of the claims is not adequately described in the specification.

The Applicants believe that the subject matter of the claims is at least disclosed in the specification on pages 26 and 27. Accordingly, the Applicants believe that, the grounds for rejection are moot.

35 U.S.C. § 103(a) REJECTIONS

The Examiner has rejected claims 1, 9-13, 21, 23, 24, 26, 28, 29, 31, 33, 34, 36, 38, and 39 under 35 USC § 103(a) as being unpatentable over U.S. Patent Number 5,402,143 to Ge, et al. ("Ge" or the "Ge Reference") in view of U.S. Patent Number 5,912,651 to Bitzakidis, et al. (Bitzakidis" or the "Bitzakidis Reference"); claims 2-4, 14-20, 22, 25, 27, 30, 32, 35, 37, and 40 under 35 USC § 103(a) as being unpatentable over Ge in view of Bitzakidis, further in view of U.S. Patent Number 5,572,341 to Fergason ("Fergason" or the "Fergason Reference"); claim 5 under 35 USC § 103(a) as being unpatentable over Ge in view of Bitzakidis, further in view of U.S. Patent Number 5,760,858 to Hodson, et al. ("Hodson" or the "Hodson Reference");

claim 6 under 35 USC § 103(a) as being unpatentable over Ge in view of Bitzakidis, further in view of Fergason and Hodson; claim 7 under 35 USC § 103(a) as being unpatentable over Ge in view of Bitzakidis, further in view of U.S. Patent Number 5,535,027 to Kimura, et al. ("Kimura" or the "Kimura Reference'"); and claim 8 under 35 USC § 103(a) as being unpatentable over Ge in view of Bitzakidis, further in view of Fergason and Kimura. The Applicants respectfully traverse these rejections in view of the above amendments and for reasons detailed below.

Claims 1, 9-13, 21, 23, 24, 26, 28, 29, 31, 33, 34, 36, 38, and 39

Independent claims 1, 11, and 13 have each been amended to recite further that the first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals. Moreover, all of the light output layers shine simultaneously and/or when a specified time has elapsed.

None of the cited references, particularly the Ge reference, teaches, mentions or suggests this feature. Referring to FIG. 1, the Examiner asserts that the Ge reference discloses light output layers (78) arranged as stripes extending in the direction of scanning lines (54). Notwithstanding that the color phosphor strips (78) do not output light but, rather, merely reflect electrons produced by a cathode (90), each "light output layer", however, does not correspond to a unique scan electrode (54). Light reflected from the phosphor strips (78) can travel to any of the scanning lines (54).

Moreover, with respect to claims 31, 33, 34, 36, 38, and 39, the present invention provides that the luminance output of the light output layer is so adjusted

> to synchronize with the maximum luminance included in the data signal for each scan line, and the transmittance of the liquid crystal corresponding to the light output layer is controlled according to the luminance indicated by the data signal and the adjusted luminance output of the light output layer.

Accordingly, by synchronizing the luminance output of the light output layer with the highest luminance among the luminances indicated by the data signals for each scan line, i.e., the maximum luminance, it is possible to control the transmittance of the liquid crystal at 0 % to 100 % even in a low-luminance display. See, e.g., Specification, page 26, line 15 to page 28 line 1. This improves display quality of low-luminance displays. Thus, "the maximum luminance of the light output layer" does not refer (as the Examiner suggests) the upper limit of the output value but, rather, the adjusted value lower than the upper limit.

None of the cited references teaches, mentions or suggests that a high-definition image display can be obtained by adjusting the luminance output of the light output layer not to the maximum luminance of the light output layer but to the highest luminance.

Thus, it is respectfully submitted that, claims 1, 9-13, 21, 23, 24, 26, 28, 29, 31, 33, 34, 36, 38, and 39 are not made obvious by Ge in view of Bitzakidis and, further, satisfy the requirements of 35 U.S.C. § 100, et seq., especially § 103(a). As such, the Applicants believe that claims 1, 9-13, 21, 23, 24, 26, 28, 29, 31, 33, 34, 36, 38, and 39 are allowable. Moreover, it is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

Claims 2-4, 14-20, 22, 25, 27, 30, 32, 35, 37, and 40

Similarly, independent claims 2 and 14 have each been amended to recite further that the first substrate includes a plurality of light output layers, each of which is structured and that is arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals. Moreover, all of the light output layers shine simultaneously and/or when a specified time has elapsed.

None of the cited references, particularly the Ge reference, teaches, mentions or suggests this feature. Referring to FIG. 1, the Examiner asserts that the Ge reference

discloses light output layers (78) arranged as stripes extending in the direction of scanning lines (54). Notwithstanding that the color phosphor strips (78) do not output light but, rather, merely reflect electrons produced by a cathode (90), each "light output layer", however, does not correspond to a unique scan electrode (54). Light reflected from the phosphor strips (78) can travel to any of the scanning lines (54).

Nor can the Fergason reference make up for the deficiencies of the Ge and Bitzakidis references. Indeed, the Fergason reference does not teach, mention or suggest a first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals.

Moreover, with respect to claims 32, 35, 37, and 40 the present invention provides that the luminance output of the light output layer is so adjusted

> to synchronize with the maximum luminance included in the data signal for each scan line, and the transmittance of the liquid crystal corresponding to the light output layer is controlled according to the luminance indicated by the data signal and the adjusted luminance output of the light output layer.

Accordingly, by synchronizing the luminance output of the light output layer with the highest luminance among the luminances indicated by the data signals for each scan line, i.e., the maximum luminance, it is possible to control the transmittance of the liquid crystal at 0 % to 100 % even in a low-luminance display. See, e.g., Specification, page 26, line 15 to page 28 line 1. This improves display quality of low-luminance displays. Thus, "the maximum luminance of the light output layer" does not refer (as the Examiner suggests) the upper limit of the output value but, rather, the adjusted value lower than the upper limit.

Accordingly, claims 2-4, 14-20, 22, 25, 27, 30, 32, 35, 37, and 40 are not made obvious by Ge in view Bitzakidis, further in view of Fergason and, further, satisfy the requirements of 35 U.S.C. § 100, et seq., especially § 103(a). As such, the Applicants believe that the claims and all claims depending therefrom are allowable. Moreover, it

is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

Claim 5

For the same reasons provided above that the Ge and Bitzakidis references do not make obvious claim 2 of the present invention, the Ge and Bitzakidis reference also do not make claim 5 obvious. Nor can the Hodson reference make up for the deficiencies of the Ge and Bitzakidis references. Indeed, the Hodson reference does not teach, mention or suggest a first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals. Therefore, it is respectfully submitted that, claim 5 is not made obvious by Ge in view of Bitzakidis, further in view of Hodson and, further, satisfies the requirements of 35 U.S.C. § 100, et seq., especially § 103(a). As such, the Applicants believe that claim 5 is allowable. Moreover, it is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

Claim 6

For the same reasons provided above that the Ge, Bitzakidis, and Fergason references do not make obvious claim 2 of the present invention, Ge, Bitzakidis, and Fergason, further in view of Hodson do not make claim 6 obvious. Nor can the Hodson reference make up for the deficiencies of the Ge, Bitzakidis, and Fergason references. Indeed, the Hodson reference does not teach, mention or suggest a first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals. Therefore, it is respectfully submitted that, claim 6 is not made obvious by Ge in view Bitzakidis, further in view of Fergason and further in view of Hodson and, further, satisfies the requirements of 35 U.S.C. § 100, et seq., especially § 103(a). As such, the Applicants believe that claim 6 is allowable.

Moreover, it is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

Claim 7

Nor can the Kimura reference make up for the deficiencies of the Ge and Bitzakidis references. Kimura discloses a display device having a plurality of luminous sources arrayed in parallel with each other, a plurality of linear electrodes arrayed with each other, wherein the luminous sources are crossed with the linear electrodes, and a plurality of photoconductive layers provided at these crossed positions. See, e.g., Kimura, Abstract. Kimura, however, does not teach, mention or suggest a first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals.

Therefore, it is respectfully submitted that, claim 7 is not made obvious by Ge in view of Bitzakidis, further in view of Kimura and, further, satisfies the requirements of 35 U.S.C. § 100, et seq., especially § 103(a). As such, the Applicants believe that claim 7 is allowable. Moreover, it is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

Claim 8

Nor can the Kimura reference make up for the deficiencies of the Ge, Bitzakidis, and Fergason references. Indeed, the Kimura reference does not teach, mention or suggest a first substrate includes a plurality of light output layers, each of which is structured and arranged in stripes, corresponding to and extending in the same direction as a unique electrode that applies scan signals.

Therefore, it is respectfully submitted that, claim 8 is not made obvious by Ge in view Bitzakidis, further in view of Fergason and further in view of Kimura and, moreover, satisfies the requirements of 35 U.S.C. § 100, et seq., especially § 103(a).

As such, the Applicants believe that claim 8 is allowable. Moreover, it is respectfully submitted that the subject application is in condition for allowance. Early and favorable action is requested.

The Applicants believe that no additional fee is required for consideration of the within Response. However, if for any reason the fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

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